

## WHAT IS CLAIMED IS:

- 1           1.       A seat for use by an occupant in a vehicle, the seat comprising:  
2                   a seat base configured to be supported in the vehicle;  
3                   a back frame including a first transverse member, a first side member and a  
4 second side member, wherein the first transverse member interconnects each of the side  
5 members at a location toward an upper end of the back frame, the back frame further  
6 including a second transverse member interconnecting the first and second side members a  
7 spaced distance from the first transverse member;  
8                   a compliant back member having a first end operably connected to the first  
9 transverse member and a second end operably connected to the second transverse member;  
10                  and  
11                   a biasing member having a first end operatively engaging the compliant back  
12 member and a second end being anchored with respect to the back frame wherein when a  
13 seat occupant's back applies a force to the compliant back member, the biasing member  
14 applies a reaction force.
- 1           2.       The seat of claim 1, wherein the compliant back is coupled to the second  
2 transverse member by at least one pivot member such that the upper portion of the  
3 compliant back extends in a cantilevered fashion over the upper end of the back frame and a  
4 spaced distance from the back frame, wherein when the occupant in the seat leans into the  
5 upper portion of the compliant back, the upper portion can flex about the pivot until  
6 contacting the upper end of the back frame.
- 1           3.       The seat of claim 2, including at least one additional pivot member located a  
2 spaced distance from the other pivot member and coupled to the compliant back and the  
3 second transverse member.
- 1           4.       The seat of claim 1, including a side bolster, with one side bolster coupled to  
2 each of the first and second side members of the back frame and extended from the side  
3 members.
- 1           5.       The seat of claim 4 wherein the side bolsters are aligned with the compliant  
2 back such that the compliant back can be moved clear of the side bolsters.

1           6.       The seat of claim 5, wherein the compliant back includes a slotted, flexible  
2 portion and expanded side portions configured to extend above the side bolsters to support  
3 the upper back and extremities of the occupant of the seat.

1           7.       The seat of claim 1, wherein the biasing member is coupled to at least one of  
2 the side members and the lower portion of the compliant back.

1           8.       The seat of claim 1, wherein the biasing member includes an adjuster to vary  
2 the tension in the biasing member to effect tension in the compliant back.

1           9.       The seat of claim 1, wherein the biasing member includes at least one spring.

1           10.      The seat of claim 1, wherein the seat is an automobile seat.

1           11.      The seat of claim 1, including a change of position mechanism coupled to the  
2 back frame and seat base, wherein the back frame is moved in proportional relation to the  
3 seat base.

1           12.      The seat of claim 11, wherein the change of position mechanism includes at  
2 least one electric motor.

1           13.      A seat for use by an occupant in a vehicle, the seat comprising:  
2                   a seat back frame;  
3                   a compliant back member having a first portion pivotally connected to the  
4 seat back frame and a second portion laterally spaced from the first portion, the second  
5 portion pivotally and slidably connected to the seat back frame; and  
6                   a biasing member having a first end operatively and slidably engaging the  
7 compliant back member, the biasing member including a second end being anchored with  
8 respect to the back frame wherein the biasing member applies a force against the compliant  
9 back member.

1           14.      The seat of claim 13 further comprising a motor connected to the biasing  
2 member and wherein the biasing member is adjustable to selectively adjust the amount of  
3 force applied by the biasing member against the compliant back member.

1           15.      The seat of claim 14 wherein the biasing member comprises:  
2                   a first spring member aligned with the first side portion of the back frame,  
3 the first spring member having a first end having a roller member connected thereto, the  
4 roller member of the first end of the first spring member engaging the compliant back  
5 member in a location aligned with a lumbar portion of the back of an occupant;

4 roller member of the first end of the first spring member engaging the compliant back  
5 member in a location aligned with a lumbar portion of the back of an occupant;  
6 a second spring member located between the second side portion of the back  
7 frame and the first spring member, the second spring member having a first end having a  
8 roller member connected thereto, the roller member of the first end of the second spring  
9 member engaging the compliant back member in a location aligned with a lumbar portion of  
10 the back of an occupant; and  
11 a lateral support member interconnecting the first spring member and the  
12 second spring member laterally transferring forces between the first spring member and the  
13 second spring member.